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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,012	07/03/2000	Tien-Jen Lin	H000029	3669
34003	7590	02/05/2004		
INTELLECTUAL PROPERTY SOLUTIONS, INCORPORATED 5717 COLFAX AVENUE ALEXANDRIA, VA 22311			EXAMINER NGUYEN, JENNIFER T	
			ART UNIT 2674	PAPER NUMBER 14

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,012

Applicant(s)

LIN, TIEN-JEN

Examiner

Jennifer T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,8 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,8 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 06/16/2003.

Double Patenting

2. Claims 5, 8, and 11-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 09/609,651 (Lin et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between claims in the two applications are scanning interface and connector. In claims of instant application No. 09/610012 discloses first and second scanning interfaces. In claims of copending application No. 09/609,651 discloses a scanning interface. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make separately one scanning interface become first and second scanning interfaces.

In claims of instant application No. 09/610012 discloses a connector (126). In claims of copending application No. 09/609,651 discloses first and second connector (CN1) and (CN2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make integrally first connector (CN1) and second connector (CN2) become a connector (126) to reduce the cost of the whole system.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This Double Patenting rejection will be withdrawn when Applicant files a Terminal Disclaimer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 5, 8, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kinoshita et al. (U.S. Patent No. 6,246,385).

Regarding claims 5 and 12, referring to Figs. 1-3, Kinoshita teaches a liquid crystal display module, comprising: a liquid crystal display panel (14) having a plurality of scanning lines (12) parallel to a first side (15) of the liquid crystal display panel (14); a driving circuit unit (18) for generating a first scanning control signal and a second scanning control signal; a first scanning unit (17A), comprising: a first scanning circuit board (not shown), coupled to the driving circuit unit (18), for receiving the first scanning control signal; and a plurality of first scan drivers, coupled between the first scanning circuit board and a second side (17A) of the liquid crystal display panel (14), for sequentially scanning the scanning lines (12) according to the first scanning control signal; and a second scanning unit (17B) having the same layout as the first scanning unit (17A), comprising: a second scanning circuit board (not shown), coupled to the driving circuit unit (18) for receiving the second scanning control signal; and a plurality of second scan drivers, coupled to the second scanning circuit board and a third side (17B) of the liquid crystal display panel (14) opposite to the second side (17A) of the liquid crystal display

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panel (14) for sequentially scanning the scanning lines (12) according to the second scanning control signal; wherein the first scanning unit (17A) and the second scanning unit (17B) drive one of the scanning lines (12) simultaneously; the first scanning circuit board is the same as the second scanning circuit board the first scanning circuit board is connected to the first scan drivers with a first side (17A); the second scanning circuit board is connected to the second scan drivers with a second side (17B) opposite to the first side (17A); and the scanning of the first scan drivers and the scanning of the second scan drivers are in reverse order (see abstract, from col. 25, line 1 to col. 26, line 26).

Regarding claim 8, referring to Figs. 1-3, Kinoshita teaches a liquid crystal display module, comprising: a liquid crystal display panel (14) having a plurality of scanning lines (12) parallel to a first side (15) of the liquid crystal display panel (14); a driving circuit unit (18) for generating a first scanning control signal and a second scanning control signal; a first scanning unit (17A), coupled to the driving circuit unit (18) and a second side of the liquid crystal display panel (14) adjacent to the first side (15) of the liquid crystal display panel (14), for receiving the first scanning control signal and sequentially driving each of the scanning lines (12) in the liquid crystal display panel (14); and a second scanning unit (17B) having the same layout as the first scanning unit (17A), coupled to the driving circuit unit (18) and a third side of the liquid crystal display panel (14) opposite to the second side (17A) of the liquid crystal display panel (14) for receiving the second scanning control signal and sequentially driving each of the scanning lines (12) in the liquid crystal display panel (14); wherein the first scanning unit (17A) and the second scanning unit (17B) drive one of the scanning lines (12) simultaneously the first scanning control signal includes a first data shifting direction signal (from left to right) and the second scanning

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control signal includes a second data shifting direction signal (from right to left); and the first data-shifting direction signal of the first scanning control signal and the second data-shifting direction signal of the second scanning control signal represent the reverse shifting directions (see abstract, from col. 25, line 1 to col. 26, line 26).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being obvious over Kinoshita et al. (U.S. Patent No. 6,246,385) in view of Sugimoto et al. (U.S. Patent No. 5,777,610).

Regarding claim 11, referring to Figs. 1-3, Kinoshita teaches a liquid crystal display module, comprising: a liquid crystal display panel (14) having a plurality of scanning lines (12) parallel to a first side (15) of the liquid crystal display panel (14); a driving circuit unit (18) for generating a first scanning control signal and a second scanning control signal; a first scanning unit (17A), comprising: a first scanning circuit board (not shown), coupled to the driving circuit unit, for receiving the first scanning control signal; and a plurality of first scan drivers coupled between the first scanning circuit board and a second side (17A) of the liquid crystal display panel (14), for sequentially scanning the scanning lines (12) according to the first scanning control signal; and a second scanning unit (17B) having the same layout as the first scanning unit (17A), comprising: a second scanning circuit board (not shown), coupled to the driving circuit unit (18), for receiving the second scanning control signal; and a plurality of second scan drivers,

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coupled to the second scanning circuit board and a third side (17B) of the liquid crystal display panel (14) opposite to the second side (17A) of the liquid crystal display panel (14) for sequentially scanning the scanning lines (12) according to the second scanning control signal; wherein the first scanning unit (17A) and the second scanning unit (17B) drive one of the scanning lines (12) simultaneously the first scanning circuit board is the same as the second scanning circuit board each scanning circuit board, located in a liquid crystal display module with a liquid crystal display panel (14) for connecting with a plurality of scanning drivers to scan a plurality of scanning lines (12) extending from a first side (15) of the liquid crystal display panel (14) to a second side (17A) of the liquid crystal display panel (14); a first scanning interface (between scanning line left drive circuit 17A and the liquid crystal display panel 14), located at a first side of the scanning circuit board, for transferring the scanning control signal to the scan drivers connected with the first scanning interface and driving each of the scanning lines (12) from the first side of the liquid crystal display panel (14); a second scanning interface (between scanning line right drive circuit 17B and the liquid crystal display panel 14) located at a second side of the scanning circuit board opposite to the first side of the scanning circuit board, for transferring the scanning control signal to the scan drivers connected with the second scanning interface and driving each of the scanning lines (12) from the second side of the liquid crystal display panel (14) wherein the scanning control signal contains a data-shifting direction signal; and the data-shifting direction signal represent reverse shifting directions (see abstract, from col. 25, line 1 to col. 26, line 26).

Kinoshita differs from claim 11 in that he does not specifically teach a connector for

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connecting with an external connector and receiving a scanning control signal; and an on-board circuit for sending the scanning control signal received to the first or second scanning interfaces. However, referring to Fig. 4, Sugimoto teaches a connector (18) for connecting with an external connector and receiving a scanning control signal; and an on-board circuit (14) for sending the scanning control signal received to the first or second scanning interfaces (col. 10, lines 36-67 and col. 11, line 1-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the connector and the on-board circuit as taught by Sugimoto in the system of Kinoshita in order to improve the reliability of the device.

7. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being obvious over Kinoshita et al. (U.S. Patent No. 6,246,385) in view of Moon (U.S. Patent No. 6,480,180).

Regarding claims 13-16, Kinoshita further teaches first scan drivers and second scan drivers (from col. 25, line 1 to col. 26, line 26).

Kinoshita differs from claims 13-16 in that he does not specifically teach the scan drivers are integrated circuits in tape carrier packages. However, referring to Fig. 8, Moon teaches scan drivers are integrated circuits in tape carrier packages (col. 7, lines 6-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the scan drivers are integrated circuits in tape carrier packages as taught by Moon in the system of Kinoshita in order to attain an easy carrying and decrease the thickness of the panel.

Response to Arguments

8. Applicants' arguments filed 11/20/2003, have been fully considered but they are not persuasive because as follows:

In response to applicant's argument that claim recites "Kinoshita does not teach that the circuit boards of two scanning units are the same". This argument is not persuasive because Kinoshita teaches two scanning units (17A and 17B) are the same. It is well known in the art that scanning units include circuit boards to control the transmitting signals to display elements. Applicant also argued, "Kinoshita does not teach or suggest first scan drivers and second scan drivers scanning one of the scanning lines simultaneously". This argument is not persuasive because the first scan drivers on the first side and second scan drivers on the second side opposite to the first side; and the scanning of the first scan drivers and the scanning of the second scan drivers are in reverse order and reverse shifting directions wherein are first scan drivers and second scan drivers scanning the same scanning line simultaneously. This limitation contains various inconsistencies and / or ambiguities so that the examiner is unable to understand how the forces do apply on the apertures. For the best understood of examiner in that Kinoshita teaches the first scanning unit (17A) and the second scanning unit (17B) drive the scanning lines (X1, X2N) simultaneously; the first scanning circuit board is the same as the second scanning circuit board the first scanning circuit board is connected to the first scan drivers with a first side (17A); the second scanning circuit board is connected to the second scan drivers with a second side (17B) opposite to the first side (17A); and the scanning of the first scan drivers and the scanning of the second scan drivers are in reverse order (see abstract, from col. 25, line 1 to col. 26, line 26).

Therefore, it is believed that the limitation of claims 5, 8, and 11-16 are still met by Kinoshita and Sugimoto and the rejections are still maintained.

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9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**. The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, DC. 20231

Or faxed to: 703-872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is 703-306-0377.

Jennifer T. Nguyen
01/30/2003


REGINA LIANG
PRIMARY EXAMINER